

Browse Survey Analysis

Date surveyed: 8/20/14
Acres: Approximately 9,500
Area: Cat Island NWR
Parish: West Feliciana
Deer physiographic region: Bottomland hardwood
Surveyors: Johnathan Bordelon & Nick Wirwa

Indicators

Total woody species- 26 (30 to 50 normally observed)

Avg. number species per transect - 9 (35%) (Low \leq 33 Mod 34-66% High \geq 67%)

Avg. number species browsed per transect - 3 (33%) (Low 0-33% Mod 34-66% High \geq 67%)

Avg. number plants browsed per transect - 8 (10 to 30 is normal range)

Indicator / important species utilization summary (5 plant min. per species): Sugarberry/Hackberry
- 0%, greenbrier – 55%

Herbaceous plants recorded: Nettle, lizard tail, jumpseed, verbena*.

* - Herbaceous species browsed.

Overall browse availability rating- 1.6 (scale 1-5)

Transects-	1.	2/5	75% canopy	15 0647391E	3406913N
	2.	1.5/5	80% canopy	15 0648233E	3405794N
	3.	1/5	90% canopy	15 0647274E	3403762N
	4.	1/5	80% canopy	15 0647287E	3403461N
	5.	1.5/5	80% canopy	15 0645778E	3404513N
	6.	3/5	75% canopy	15 0642720E	3402531N
	7.	3/5	75% canopy	15 0642821E	3403041N
	8.	1/5	75% canopy	15 0648292E	3406822N
	9.	1/5	80% canopy	15 0643441E	3404179N
	10.	1/5	80% canopy	15 0644062E	3403837N

Survey Method: Ten transects were conducted across the property representing current habitat conditions. Each transect was 100' x 5'. All browse plants found inside the transects were recorded. In addition, each plant browsed was counted as browsed by deer. The indicator species list above is also of value. Basically those are desirable plants that were counted each time one was encountered as both present and browsed. The percent utilization of those plants was determined and listed for future comparison and to measure pressure on those preferred species. If reviewing the spreadsheet, the species with a y in the indicator column are the plants we counted each time they occurred on the line. The other species that have a 1 listed in the present column were species we identified as present on that line. However, the total number of occurrences is not

recorded for those species. I just included them as present and available. The total number of times they were browsed was counted.

Assessment: Woody plant diversity is considered low with 26 total woody species present on the transects. There were other species observed that did not occur along the transect lines. While diversity is desirable, availability is very important. The 1.6 browse availability on a scale of 5 is low availability but water and timing is an important variable on Cat Island NWR. Many of the area's surveyed were recently flooded. The combination of shade and water led to the low availability rating of 1.6. That number will fluctuate on the refuge due to timing and impacts from flooding. The scale is just a basic field observation that ranks plant availability for deer with 1 being the lowest availability and 5 the highest.

The most preferred species of plants that provide the greatest nutritional benefit for deer are being browsed at a low to moderate rate. Indicator species or preferred species on this survey were not highly abundant. Species such as rattan and deciduous holly were observed but they did not occur often on the transect lines. We used a 5 plant minimum sample which is still small. Smilax was the most abundant indicator species with 73 occurring along the transects. 55% of those plants were browsed which is moderate utilization of a desirable plant species. While the sample size is small the few rattan and deciduous holly plants observed were not browsed. This supports and compliments the results from our transects surveyed across the refuge. At this time deer are placing low browsing pressure on food resources that are rated as low to moderate. Since overall deer condition and productivity will be influenced by these important plants, it is a number and percentage of significance. Deer are selective feeders and they choose the most nutritious plants to consume first. It appears the herd that is within the carrying capacity of the habitat. This will ensure deer are reaching their physical and reproductive potential for the site.

The average number of plants browsed per transect was 8 but the range was 1 – 45. However, the 45 was the exception since all other transects were under 10. The transect with a count of 45 occurred on one of the higher areas that seemed to not have been impacted by flooding. This easily explains why the total for that one transect was so much higher. Typically browse surveys are done much earlier in the growing season but flooding caused a delay in the survey. Timing of future surveys may vary due to the frequency of flooding on this refuge. Numbers gathered are still very useful despite the timing of the survey. Everything points towards a herd that is within the carrying capacity of the habitat. This is always important but maybe even more so in an area that is subject to diminished habitat conditions at times due to flooding.

Thank you,

Johnathan Bordelon
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LDWF Deer Browse Survey

Date of Survey: 8/20/14			Transect Number																				Totals by Species			Presence
YEAR	2014	Indicator Species? (Y/N)	1		2		3		4		5		6		7		8		9		10		plants present	plants utilized	percent utilization	
Scientific Name	Common Name		P	U	P	U	P	U	P	U	P	U	P	U	P	U	P	U	P	U	P	U				
Acer negundo	boxelder																									
Acer rubrum	swamp red maple																									
Acer rubrum	red maple																									
Acer sp.	maple																									
Albizia julibrissin	mimosa																									
Alnus serrulata	hazel alder																									
Amelanchier arborea	serviceberry																									
Amorpha fruticosa	leadplant																									
Ampelopsis arborea	peppervine				1		1		1		1		1		1		1	1	1			8	1			
Ampelopsis cordata	heartleaf peppervine																									
Aralia spinosa	devil's-walkingstick																									
Ascyrum hyperioides	St. Andrew's-cross																									
Asimina triloba	pawpaw																									
Baccharis halimifolia	saltbush		1																			1				
Berchemia scandens	rattan-vine	y				2											2					4				
Bignonia capreolata	crossvine																									
Brunnichia ovata	ladies' - eardrops		1		1				1		1			1				1		1		7				
Bumelia sp.	buckthorn						1	1	1	1										1	1	3	3			
Callicarpa americana	French mulberry																									
Campsis radicans	trumpet creeper				1	2		1	4			1	2		1	1						4	9			
Carpinus caroliniana	ironwood/bluebeech																									
Carya sp.	hickory		1		1						1		1									4				
Castanea pumila	chinquapin																									
Celtis sp.	sugarberry/hackberry	y									5			1				2		1		9				
Cephalanthus occidentalis	buttonbush		1	1																		1	1			
Cercis canadensis	e. redbud																									
Chionanthus virginicus	fringe-tree																									
Clematis	leather flower						1		1					1				1	2	1		5	2			
Sharankia sp.	sens. Briar																									
Cocculus carolinus	red-berried moonseed						1						1					1		1		4				
Cornus drummondii	swamp dogwood																									
Cornus florida	flowering dogwood																									
Crataegus sp.	hawthorn																									
Cyrtilla racemiflora	white titi																									
Decumaria barbera	climbing hydrangea																									
Diospyros virginiana	persimmon		1		1						1											3				
Erythrina herbacea	mamou																									
Euonymus americanus	strawberry-bush																									
Fagus grandifolia	American beech																									
Forestiera acuminata	swamp privet										1	1										1	1			
Fraxinus sp.	ash																			1		1				
Gelsemium sempervirens	yellow-jessamine																									
Gleditsia aquatica	waterlocust																									
Gleditsia triacanthos	honeylocust		1		1		1				1					1						5				
Halesia diptera	two-winged silverbell																									
Hamamelis virginiana	witch-hazel																									
Ilex cassine	dahoon																									
Ilex coriacea	large gallberry																									
Ilex decidua	deciduous holly	y							1				1									2				
Ilex glabra	gallberry																									
Ilex verticillata	winterberry																									
Ilex opaca	American holly																									
Ilex vomitoria	yaupon																									
Itea virginica	Virginia willow																									
Juniperus virginiana	e. redcedar																									
Ligustrum sinense	Chinese privet																									
Lindera benzoin	spicebush																									
Liquidambar styraciflua	sweetgum																									
Liriodendron tulipifera	yellow-poplar																									
Lonicera japonica	j. honeysuckle																	1				1				
Lonicera sempervirens	coral honeysuckle																									
Lygodium sp.	climbing fern																									
Magnolia grandiflora	southern magnolia																									
Magnolia virginica	sweetbay magnolia																									
Malus angustifolia	s. crabapple																									
Melia azedarach	chinaberry																									
Morus rubra	red mulberry																									
Myrica cerifera	wax-myrtle																									
Nyssa sp.	gum / tupelo																									

